To: Smith, Mark A.[Smith.Marka@epa.gov]
From: Weber, Rebecca
Sent: Tue 11/24/2015 1:53:15 PM
Subject: Fwd: Draft Deliberative - Bridgeton Landfill data analysis for August 2015
2015- Aug_StLouisMonthlyAnalysis_draft_Fin.docx
ATT00001.htm

Not sure timing needs on this....

Sent from my iPhone

Begin forwarded message:

From: "Juett, Lynn" <Juett.Lynn@epa.gov>
To: "Smith, Mark A." <Smith.Marka@epa.gov>, "Weber, Rebecca" <Weber.Rebecca@epa.gov>
Cc: "Stoy, Alyse" <Stoy.Alyse@epa.gov>
Subject: FW: Draft Deliberative - Bridgeton Landfill data analysis for August 2015

Note information about gas composition and flares – this is a draft report, let us know if you have any comments in the next couple of days.

Thank you,

Lynn M. Juett

Office of Regional Administrator/US EPA Region 7

11201 Renner Blvd, Lenexa KS 66219

(913) 551-7883 (d) / (913) 948-1129 (c)

From: McKernan, John
Sent: Monday, November 23, 2015 10:44 AM
To: Field, Jeff <Field.Jeff@epa.gov>; Juett, Lynn <Juett.Lynn@epa.gov>; Vann, Bradley <Vann.Bradley@epa.gov>
Cc: Weber, Robert <Weber.Robert@epa.gov>; Tolaymat, Thabet <Tolaymat.Thabet@epa.gov>; Carson, David <Carson.David@epa.gov>
Subject: Draft Deliberative - Bridgeton Landfill data analysis for August 2015

Lynn, Jeff and Brad-

Attached is the August 2015 draft deliberative data analysis for the Bridgeton Landfill. The highlights are below, and in the attached analysis in bold. Note the information on the cooling loop analysis.

North Quarry:

•□□□□□□□□ Temperature measurements in the GEWs showed steady trends for all 23 GEWs monitored.

•□□□□□□□□ Overall, the GEWs exhibited expected CH_4 and CO_2 concentrations from anaerobic conditions within the landfill, though there were a few wells that displayed elevated balance gas concentrations, which are discussed further below. As in previous months, many of the wells had low or no applied vacuum, which confounds discerning trends.

o Six out of 23 wells had balance gas concentrations > 10%,

•□□□□□□□□ No settlement data were collected for the North Quarry this month.

Neck Area:

•□□□□□□□□ Four TMPs exhibited increased temperatures at varying depths. The remaining TMPs in the neck showed mostly steady or decreasing trends.

•□□□□□□□□ This month's data displayed mostly steady trends in temperature with some increasing cases for the GIWs.

•□□□□□□□□ Five of the six GEWs displayed steady temperature trends in August compared to July 2015 data.

•□□□□□□□□ Data from 2014, and data from the current cooling loop effort, suggest that the radius of influence (i.e., ROI) for the cooling loops is not far reaching at this

time. Some slight cooling effects have been observed approximately 5 to 10 feet from the installed cooling loop, although these cooling effects were not observed at all TMP depths.

•□□□□□□□ Three out of the six GEWs (GEW-56R, GEW-109, GEW-110) in the Neck area exhibited elevated concentrations of both balance gas and/or CO_2 resulting in decreased levels of methane, indicating non-anaerobic conditions.

•□□□□□□□ All 13 GIWs exhibited high concentrations of balance gas and/or CO_2, resulting in decreased CH_4 concentrations.

•□□□□□□□ Northeast and northwest portions of the surveyed area showed slight elevation increases, while other areas showed a surface settlement less than 1 ft.

South Quarry:

•□□□□□□□ No GEWs with data had temperatures at or greater than 200 °F.

•□□□□□□□ 39 GEWs exhibited temperature readings ranging from 140 °F to 200 °F in August.

•□□□□□□□ 11 of the GEWs exhibited sustained temperatures < 100 °F in August.

•□□□□□□□ Many of the wells had vacuum pressure > 2″ w.c. in August.

o 41 of the GEWs had consistent applied vacuum > 2” w.c.

•□□□□□□□ GEW-154 was the only GEW in the South Quarry to exhibit gas concentrations consistent with anaerobic waste decomposition conditions. The remaining wells exhibited elevated balance gas and CO_2 concentrations.

•□□□□□□□ The maximum monthly settlement was approximately 2 feet.

Quarterly reports going back to the beginning of 2015 are continuing. I hope this information is helpful. Please feel free to contact me with questions or comments.

Thank you,

John

John McKernan, ScD, CIH

Captain | U.S. Public Health Service
Director | Engineering Technical Support Center

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